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PHYSICAL (IN)ACTIVITY GENDER GAP OF SLOVAK NON-ATHLETE ADOLESCENTS

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Abstract

Study purpose. Declining levels of physical activity in adolescence are of increasing concern, with data showing the difference of ≥ 8% by gender in favor of adolescent boys; therefore, the present study aims at determining physical (in)activity gender gap of non-athlete adolescent boys and girls in Slovakia.

Materials and methods. Standardized measure to estimate the habitual practice of physical activity (IPAQ-SF) was carried out six months (January – June, 2022), through the intentional sampling of 1 517 Slovak non-athlete adolescent boys (40.54%, n = 615) and girls (59.46%, n = 902), aged 18 – 19 years (18.50 ± 0.50 years), attending the secondary schools. Descriptive statistics (e.g., measures of frequency, central tendency), two-sample t-test and chi-square test (χ^2) were used to analyze and compare the data.

Results. When considering the physical activity (seven-day week) in adolescence, the Slovak non-athlete adolescent boys and girls reported: (i) high levels of physical activity – 51.73% (n = 785); (ii) moderate levels of physical activity – 25.92% (n = 393); (iii) low levels of physical activity – 22.35% (n = 339) ($p < 0.01$). When considering the gender gap in physical activity in adolescence, total physical activity (seven-day week), expressed in MET-minutes/week, was lower (statistically, $p < 0.01$; difference of 712 MET-minutes/week) among the Slovak non-athlete adolescent girls (1 898 MET-minutes/week), compared to boys (2 610 MET-minutes/week). And when considering the gender gap and sitting time (sedentary behavior), the Slovak non-athlete adolescent girls were more sedentary, compared to boys ($p > 0.05$) (360 vs. 330 minutes/week).

Conclusions. Constant low levels of physical activity in adolescence constitute the public health emergency of international concern; therefore, the urgent policy action to increase the physical activity is necessary; in particular, in promoting and retaining the adolescent girls' participation in physical activity.

Keywords: adolescent boys and girls, gender gap, non-athlete population, physical activity.

Introduction

Physical activity participation declines during the lifespan; in particular, in adolescence (Guthold et al., 2020; Mikaelsson et al., 2020; Ahmad et al., 2021). As age increases, physical activity declines and sedentary time increases (Jago et al., 2020; Aira et al., 2021; Parker et al., 2021). As a result, adolescent boys and girls worldwide, aged 5-17 years, are not achieving the recommended levels of physical activity (population); in particular, ≥ 60 minutes (1 hour) of moderate- to-vigorous intensity physical activity; incorporating vigorous aerobic activity, and activity that strengthen muscle and bone, at least three days/week (Guthold et al., 2018); however, physical activity guidelines for adolescent boys and girls was updated (2020), resulting in doing at least "an average of 60 minutes/day of moderate-to-vigorous intensity physical activity" (Guthold et al., 2020).

Physical activity should become a routine part of adolescent' lives as eating and sleeping; however, insufficient physical activity becomes the global problem and pandemic (since 2012) (Kohl et al., 2012), which requires the global action of implementing modern programs in increasing insufficient physical activity in adolescent boys and girls, because ≥ 80% of adolescent boys and girls, aged 11-17 years, worldwide remain inactive (Guthold et al., 2020; Marques et al., 2020; Ma et al., 2020); with existing gender discrepancy (gender gap) in prevalence of insufficient physical activity

(Guthold et al., 2022); in particular, in 78.84% of adolescent boys and 84.4% of girls (Sallis et al., 2016). Gender gap in physical activity in adolescence, i.e., adolescent boys are more active than girls, becomes the persistent finding in literature (Cowley et al., 2021; Beck et al., 2022; Gracia et al., 2022; Ljungman et al., 2022). Age and status (socioeconomic) are important correlates of physical activity (Ricardo et al., 2022); however, large portions of physical activity inequality are because of gender gap, increasing over time (Guthold et al., 2020). Gender gap in physical activity is caused by many barriers (e.g., personal, practical, cultural), which play an important role in adolescent boys' and girls' attitudes (behavior) (Manić et al., 2021; Mata et al., 2022). Adolescence is an important stage of life for improving attitudes toward physical activity; therefore, adolescent health becomes the strong predictor of adult health (Bartík et al., 2022). Besides that, 1.2 billion (bn) of the world's population (28%) remains inactive, putting their current and future health at risk (±25% increased risk of all-cause mortality) (Guthold et al., 2018). When considering the current trends, the 15% relative reduction in physical inactivity will not be possible by 2023 (Guthold et al., 2020; Mayo et al., 2020).

Physical inactivity becomes the leading (4th) risk factor, accounting for 6% of deaths worldwide, following hypertension (13%), smoking (9%), and diabetes (6%) (Joseph et al., 2022), causing the economic cost of healthcare system around $53.8 bn in direct cost (healthcare expenditure) and $13.7 bn in indirect cost (loss in productivity) in 2013, of which $31.2 bn was paid by public sectors, $12.9 bn by private sectors, and $9.7 bn by households (Ding et al., 2016). Slovakia was footing the bill of $63 216 ($6 250 – $238 384) of which $46 187 was direct cost and $17 029 was indirect cost. Athlete (active) population, on average, spent 38% more days in hospital, compared to non-athlete (inactive), using more resources of healthcare; in particular, using ≥ 5.5% of family physician visits, 12% of nurse visits, and 13% of specialist services (Sari, 2009). Because many gaps remain in literature, in terms of Slovak scale, the present study aims at determining physical (in)activity gender gap of non-athlete adolescent boys and girls in Slovakia.

Materials and methods

Study participants

In terms of study aim, the target population consisted of 1 517 Slovak non-athlete adolescent boys (40.54%, n = 615) and girls (59.46%, n = 902), aged 18-19 years (18.50 ± 0.50 years), attending the secondary schools. Adolescent boys and girls (n = 1 517) consisted of convenience sample – non-athlete and Slovak (citizenship), recruited through the complete school system – EduPage (Bartlett et al., 2017; Garavan et al., 2018). Subjective self-report measure (questionnaire) to estimate the habitual practice of physical activity (seven-day week) was carried out six months (January – June, 2022), aiming for intentional sampling, regarding age, gender, and year of study. Data interpretation process (authentic) consisted of 2 375 debriefing forms; however, 36.12% (n = 858) were excluded. Reasons for not meeting the inclusion criteria were as follows: (i) not sick (ill) (seven-day week) (18.42%, n = 158); (ii) non-participation in organized team- and individual sports (81.58%, n = 700). The present study was carried out in accordance with the ethical standards as laid down in the 1964 Declaration of Helsinki and its later amendments and/or comparable ethical standards. All subjects provided written informed consent.

Study organization

Subjective self-report single-measure comparative study (descriptive) was carried out six months (January – June, 2022), in order to determine (analyze and compare) the physical (in)activity gender gap of non-athlete adolescent boys and girls in Slovakia. Available research instrument ("International Physical Activity Questionnaire – Short Form") (IPAQ-SF) was online (unlimited time), collecting the data of non-athlete adolescent boys (40.54%, n = 615) and girls (59.46%, n = 902) in Slovakia. Available feedback (online) did not indicate any problems (e.g., comparative design/ grammar and vocabulary). Questionnaire incentive was not given (voluntary participation); however, non-athlete adolescent boys and girls (n = 1 517) (i.e., "study group") received the reports with their personal results afterwards. Self-report measure (IPAQ-SF) was not identifying any information about the identity, was chosen because of being inexpensive, easy to use in large scale, and time saving (Microsoft Forms, Office 365, Microsoft Corp., Redmond, WA, USA).

Available research instrument (IPAQ-SF) assesses the types (intensity) of physical activity and sitting time (seven-day week), which the target population (15 years of age + more) do as a part of their lives and estimate the total physical activity in Metabolic equivalent of task (MET-minutes/ week) and/or time sitting (Masala et al., 2018; Tran et al., 2018). Metabolic equivalent of task (MET; unit) estimates the energy expenditure as reflected by oxygen consumption (metabolic cost) of physical activity – resting metabolic rate (Lavelle et al., 2020; Meh et al., 2022). Available data of study group (n = 1 517) were converted from MET-min/ week and multiplied the number of exercise min/ day by number of exercise days/ week by exercise intensity coefficient – MET: (i) vigorous physical activity – 8 MET; (ii) moderate physical activity – 4 MET; (iii) walking – 3.3 MET. 1 MET is equal to 3.5 ml oxygen kg - 1 body weight/ min – 1 (Ács et al., 2020). Available research instrument (IPAQ-SF) was scored in accordance with scoring system as recommended at website – www.ipaq.ki.se ("Guidelines for Data Processing and Analysis of International Physical Activity Questionnaire"), consisting of three groups: (i) high physical activity – energy expenditure exceeds 1 500 MET-min/ week, 3 or more days of vigorous intensity physical activity of ±30 min/ day, or almost every day of 30 min of moderate intensity physical activity and walking (≥3 000 MET-min/ week); (ii) moderate physical activity – energy expenditure ranges, 600 – 1 500 MET-min/ week, 3 or more days of intense physical activity of ±20 min, 5 and more days of moderate intensity physical activity of ±30 min or combination of vigorous and moderate intensity physical activity and walking (≥600 MET-min/ week); (iii) low physical activity – energy expenditure does not reach 600 MET-min/week.

Subjective self-report measure (questionnaire, IPAQ-SF) provides the cost-effective method of accessing (capturing) physical activity (intensity levels) into four generic dimensions: (i) vigorous physical activity (e.g., running, aer-

obics); (ii) moderate physical activity (e.g., leisure cycling); (iii) walking; (iiii) sitting (Ahmad et al., 2021). Available research instrument (IPAQ-SF) consisted of two sections: (i) basic demographic information (e.g., age, gender, year of study, type of school); (ii) open-ended questions surrounding the seven-day week physical activity of study group (n = 1 517), concerning physical activity associated with occupation performed and/or at school (ii-i), physical activity at home and around house (ii-ii), and moving to different places and mobility during leisure time (ii-iii) (Adamčák et al., 2022).

Statistical analysis

Available data, collected through the debriefing forms, were tabulated and figured in database designed precisely for self-report (subjective) single-measure comparative study (descriptive). Incidence of responses; each item of study group (n = 1 517) was evaluated (e.g., analyze, compare) by using the program of Tap3 – Gamo (Banská Bystrica, Slovakia). After cleaning available data of study group (n = 1 517), descriptive statistics (e.g., measures of frequency, central tendency) were used to analyze and compare the data. Differences (statistical) between the study group (n = 1 517) (boys vs. girls) were evaluated by using the methods of inductive statistics; in particular, chi-square test (χ^2) and two-sample t-test with unequal variances, of which the significance level (α) was 0.01 and 0.05. When evaluating the physical activity (e.g., high, moderate, low) of study group (n = 1 517), the chi-square test (χ^2) was used ($p < 0.01, 0.05$) and when evaluating the physical activity (e.g., vigorous, moderate, walking, sitting) and median values of study group (n = 1 517), the two-sample t-test with unequal variances was used ($p < 0.01, 0.05$).

Results

According to study aim, Figure 1 illustrates the physical activity levels of Slovak non-athlete adolescent boys and girls (n = 1 517) (MET-min/week; %). When considering the physical activity levels in adolescence (seven-day week), the Slovak non-athlete adolescent boys and girls (n = 1 517) reported (self): (i) high levels of physical activity – 51.73% (n = 785) (55.55%, n = 342 – boys vs. 47.90%, n = 432); (ii) moderate levels of physical activity – 25.92% (n = 393) (27.45%, n = 168 – boys vs. 24.40%, n = 220 – girls); (iii) low levels of physical activity – 22.35% (n = 339) (17.00%, n = 105 – boys vs. 27.70%, n = 250 – girls). Differences in % (statistical) of physical activity levels between the Slovak non-athlete adolescent boys and girls (n = 1 517) were significant (statistically) ($p < 0.01$) ($\chi^2(2) = 23.90$; $p = 6.58$ E-10).

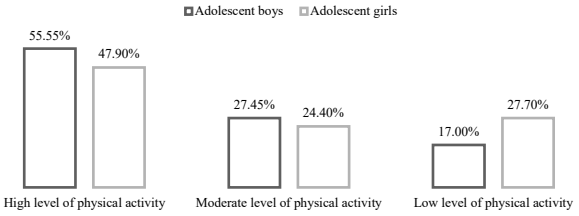

Fig. 1. Physical activity levels of Slovak non-athlete adolescent boys and girls (n = 1 517) (%) ($\chi^2(2) = 23.90$; $p = 6.58$ E-10**)

Table 1. Slovak non-athlete adolescent boys and girls (n = 1 517) and vigorous-, moderate-intensity activity and walking

Vigorous-intensity activity		Minutes/day	Days/week	MET-minutes/week
Adolescent boys	Mean	54.08	2.06	1118
	Median	45	2	720
Adolescent girls	Mean	37.76	1.86	778
	Median	30	2	480
Adolescent boys and girls	Mean	45.92	1.96	948
	Median	30	2	480
	P-value	6.92 E-12**	0.015*	1.98 E-07**
Moderate-intensity activity		**Minutes/day**	**Days/week**	**MET-minutes/week**
Adolescent boys	Mean	55.10	2.20	566
	Median	60	2	480
Adolescent girls	Mean	40.40	1.84	422
	Median	30	2	240
Adolescent boys and girls	Mean	47.75	2.02	494
	Median	30	2	300
	P-value	8.06 E-10**	1.23 E-05**	4.05 E-06**
Walking		**Minutes/day**	**Days/week**	**MET-minutes/week**
Adolescent boys	Mean	66.92	3.92	926
	Median	60	4	628
Adolescent girls	Mean	57.40	3.64	698
	Median	45	3	462
Adolescent boys and girls	Mean	62.16	3.78	812
	Median	50	3	594
	P-value	0.0001**	0.0042**	4.86 E-08**

MET = Metabolic equivalent of task; ** = $p < 0.01$; * = $p < 0.05$.

Physical activity levels of Slovak non-athlete adolescent boys and girls (n = 1 517) (MET-min/week) illustrates Figure 2. When considering the gender gap in physical activity (total) in adolescence (seven-day week), physical activity was lower (statistically, $p < 0.01$; ±712 MET-min/week) ($p = 1.90$ E-12) among the Slovak non-athlete adolescent girls (1 898 MET-min/week), compared to boys 2 610 MET-min/week). Arithmetic mean (e.g., x – measure of central tendency) of gender gap in physical activity; in particular, intensity levels, was as follows: (i) vigorous-intensity activity – 1 118 MET-min/week, boys vs. 778 MET-min/week, girls (x, 948 MET-min/week, ±340 MET-min/ week, $p = 1.98$ E-07); (ii) moderate-intensity activity – 566 MET-min/week, boys vs. 422 MET-min/week, girls (x, 494 MET-min/week, ±144 MET-min/week, $p = 4.05$ E-06); (iii) walking – 926 MET-min/week, boys vs. 698 MET-min/ week, girls (x, 812 MET-min/week, ±228 MET-min/week, $p = 4.86$ E-12) (Table 1).

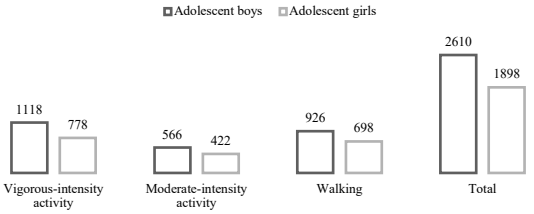

Fig. 2. Physical activity levels of Slovak non-athlete adolescent boys and girls (n = 1 517) (MET-min/week) (p = 1.90 E-12**)

Specific time (e.g., minutes/day, days/week) spent in physical activity; in particular, intensity levels, of Slovak non-athlete adolescent boys and girls (n = 1 517) (e.g., arithmetic mean, median) illustrates Table 1. When considering the gender gap in physical activity (intensity levels) of Slovak non-athlete adolescent boys ang girls (n = 1 517), arithmetic mean and/or median of vigorous-, moderate -intensity activity and walking was lower (statistically, $p < 0.01$, 0.05) among the Slovak non-athlete adolescent girls, compared to boys. Differences in arithmetic mean and/or median (statistical) spent in physical activity; in particular, intensity levels, between the Slovak non-athlete adolescent boys and girls (n = 1 517), were as follows: (i) vigorous-intensity activity – 45 min/day (2 days/week), boys vs. 30 min/day (2 days/week), girls (min/day, $p = 6.92$ E-12; days/week, $p = 0.15$); (ii) moderate-intensity activity – 60 min/day (2 days/week), boys vs. 30 min/day (2 days/week), girls (min/day, $p = 8.06$ E-10; days/week, $p = 1.23$ E-05); (iii) walking – 60 min/day (4 days/week), boys vs. 45 min/ day (3 days/week), girls (min/day, $p = 0.0001$; days/week, $p = 0.0042$) (Table 1).

Table 2. Slovak non-athlete adolescent boys and girls (n = 1 517) and sitting

Sitting		Minutes/ day	Days/ week
Adolescent boys	Mean	360.40	6.02
	Median	330	5.5
Adolescent girls	Mean	358.60	5.96
	Median	360	6
Adolescent boys and girls	Mean	359.50	5.99
	Median	360	6
	P-value	0.75	–

Sedentary behavior, i.e., sitting time (minutes/day, days/week) of Slovak non-athlete adolescent boys and girls (n = 1 517) (e.g., arithmetic mean, median) illustrates Table 2. When considering the gender gap and sitting time, the Slovak non-athlete adolescent girls were more sedentary, compared to boys ($p > 0.05$) (360 vs. 330 min/day, $p = 0,75$; 6 vs. 5.5 days/week) (Table 2).

Discussion

When it comes to determining the differences (gender) in physical activity (e.g., intensity, volume) between the adolescent boys and girls (aged 5-17 years) worldwide, the incidence rate is strong, with increasing numbers of carried out studies (see Introduction); however, to our knowledge, important knowledge gaps remain in literature, in terms of Slovak scale; therefore, the present study aims at determining physical (in)activity gender gap of non-athlete adolescent boys and girls in Slovakia. When considering the physical activity levels (seven-day week) in adolescence, the Slovak non-athlete adolescent boys and girls reported: (i) low levels of physical activity – 22.35% (n = 338) (±5.35%, n = 82, difference in favor adolescent girls); (ii) moderate levels of physical activity – 25.92% (n = 393) (± 1.53%, n = 23, difference in favor of adolescent boys); (iii) high levels of physical activity – 51.73% (n = 785) (±3.82%, n = 58, difference in favor of adolescent boys) ($p < 0.01$) ($\chi^2(2) = 23.90$; $p = 6.58$ E-10). Existing evidence of Polish data (5 086 adolescent boys and girls, attending the secondary schools) shows that 39. 59% of Polish adolescents (48.77% of boys and 31.35% of girls) participated in high levels of physical activity (Bergier et al., 2012). After two years, 71.98% of Polish adolescents (76.18% of boys and 67.77% of girls) were characterized by high levels of physical activity (Bergier et al., 2014). Only 18.9% (n = 76 out of 401, 100%) of Serbian adolescents (191 boys and 210 girls, aged 15-17 years) were characterized by high level levels of physical activity (Nikolić et al., 2020). Another existing evidence of Bosnian data (813 adolescent boys and girls) shows that 55.70% of Bosnian adolescents (58.90% of boys and 53.70% of girls) were characterized by high levels of physical activity (Ćosić Mulahasanović et al., 2018).

When considering the gender gap in physical activity (total) in adolescence (seven-day week), physical activity was lower (statistically, $p < 0.01$; ±712 MET-min/week) ($p = 1.90$ E-12) among the Slovak non-athlete adolescent girls (1 898 MET-min/week), compared to boys 2 610 MET-min/ week). Comparable study carried out in Lithuania shows different levels of general (total) physical activity, which was lower (±491.34 MET-min/week) among the Lithuanian adolescent girls (4 404.12 MET-min/week; n = 57 out of 101), compared to boys (4 895.46 MET-min/ week; n = 44/101) (Bergier et al., 2012). Another existing evidence of Ukrainian data (2 125 adolescent boys and girls) shows that physical activity (total) was lower (±498 MET-min/week) among the Ukrainian adolescent girls (3 365 MET-min/week; n = 1 291, 60.80%), compared to boys (3 863 MET-min/week; n = 834,

39.20%) ($p < 0.01$) (Bergier et al., 2014). Interesting study carried out in Poland/ Turkey shows that physical activity (total) was lower (±2 858.06 MET-min/week) among the Turkish adolescents (3 095.45 MET-min/week; 14 boys and 36 girls, aged 18-20 years), compared to Polish adolescents (5 953.51 MET-min/week; 25 boys and 25 girls) (Bednarek et al., 2016). In term of Slovak data, physical activity (total) (MET-min/week) of 2375 Slovak adolescents (54.56% of them adolescent girls, aged 17-19 years) was lower (statistically, $p < 0.01$, ±875 MET-min/week) among the adolescent girls (1795 MET-min/week), compared to boys (2670 MET-min/week) ($p = 2.8$ E-32) (Adamčák et al., 2022).

In accordance with study aim, physical activity gender gap of Slovak non-athlete adolescent boys and girls (n = 1 517, 100%) prevails ($p < 0.01$), which is in accordance with increasing numbers of carried out studies (see Introduction + Discussion). Besides that, the Slovak adolescent girls (59.46%, n = 902) dominate physical activity related with walking (926 MET-min/week), while among the boys (40.54%, n = 615) vigorous-intensity activity dominated (1 118 (MET-min/week). For more complete insight into physical activity patterns, we consider it necessary to separately analyze each domain of physical activity (Nikolić et al., 2020).

Conclusions

Current proportion of adolescent boys and girls meeting the global physical activity recommendation of ≥ 60 minutes (1 hour)/ day of moderate-to-vigorous intensity physical activity remains low (see Introduction). When considering the gender gap in physical activity (total) in adolescence, physical activity was lower (statistically, $p < 0.01$; ±712 MET-min/week) ($p = 1.90$ E-12) among the Slovak non-athlete adolescent girls (1 898 MET-min/week), compared to boys (2 610 MET-min/week). Persistent inequality (gender) remains and worsens with age; therefore, monitoring declining levels of physical activity in adolescence allows the identification of specific needs and inequalities within and between countries/regions. Measuring (monitoring) health indicators are important in providing the foundation for measuring inequality and guide decision (evidence-based) making in public health. Improvements in indicators of population health are acquired by increasing levels of physical activity of non-athlete population of adolescent boys and girls, instead of involving athlete population of adolescent boys and girls in more activity. Urgent policy action to increase physical activity in adolescence is necessary; in particular, in promoting and retaining adolescent girls' participation in physical activity.

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Conflict of interest

The author(s) declare that the research was conducted in the absence of any commercial and/ or financial relationships that could be construed as a potential conflict of interest.

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ГЕНДЕРНИЙ РОЗРИВ У ФІЗИЧНІЙ (НЕ)АКТИВНОСТІ СЛОВАЦЬКИХ ПІДЛІТКІВ, ЯКІ НЕ ЗАЙМАЮТЬСЯ СПОРТОМ

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Авторський вклад: A – дизайн дослідження; B – збір даних; C – статаналіз; D – підготовка рукопису; E – збір коштів

Реферат. Стаття: 7 с., 2 табл., 2 рис., 40 джерел.

Мета дослідження. Зниження рівнів фізичної активності в підлітковому віці викликає дедалі більше занепокоєння, при цьому дані показують різницю ≥ 8% за параметром статі на користь хлопчиків-підлітків; тому це дослідження спрямоване на визначення гендерного розриву у фізичній (не)активності словацьких хлопців і дівчат підліткового віку, які не займаються спортом.

Матеріали та методи. Стандартизоване вимірювання для оцінки звичної практики фізичної активності (Міжнародний опитувальник із фізичної активності – Коротка форма – IPAQ-SF) проводилося протягом шести місяців (січень – червень 2022 р.) шляхом цілеспрямованої вибірки 1 517 словацьких підлітків-хлопців (40,54%, n = 615) та дівчат (59,46%, n = 902), які не замаються спортом, віком 18–19 років (18,50 ± 0,50 років), і які навчаються у загальноосвітніх школах. Для аналізу та порівняння даних використовували описову статистику (наприклад, вимірювання частоти, середнє значення розподілу), t-критерій Стьюдента на основі подвійної вибірки та критерій хі-квадрат (χ^2).

Результати. Розглядаючи фізичну активність (семиденний тиждень) у підлітковому віці, словацькі хлопці та дівчата підліткового віку, які не займаються спортом, повідомили: (i) високі рівні фізичної активності – 51,73% (n = 785); (ii) помірні рівні фізичної активності – 25,92% (n = 393); (iii) низькі рівні фізичної активності – 22,35% (n = 339) (p < 0,01). Розглядаючи гендерний розрив у фізичній активності в підлітковому віці, загальна фізична активність (семиденний тиждень), виражена в метаболічному еквіваленті навантаження MET-хвилинах/тиждень, була нижчою (статистично, p < 0,01; різниця 712 MET-хвилин/тиждень) серед словацьких дівчат підліткового віку, які не займаються спортом (1 898 MET-хвилин/тиждень), порівняно з хлопцями (2 610 MET-хвилин/тиждень). А якщо розглядати гендерний розрив і час сидіння (пасивний спосіб життя), словацькі дівчата підліткового віку, які не займаються спортом, вели більш пасивний спосіб життя порівняно з хлопцями (p > 0,05) (360 проти 330 хвилин на тиждень).

Висновки. Постійно низькі рівні фізичної активності в підлітковому віці становлять надзвичайну ситуацію в галузі охорони здоров'я, що викликає міжнародне занепокоєння; отже, необхідні термінові політичні дії з метою підвищення фізичної активності; зокрема, які сприяють участі та підтримують участь дівчат підліткового віку у фізичній активності.

Ключові слова: хлопці та дівчата підліткового віку, гендерний розрив, населення, яке не займається спортом, фізична активність.

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